

Serial No.: 09/954,773

IN THE CLAIMS:

Please amend the claims as follows:

1-37. (Canceled)

38. (Currently amended) A method of determining the presence of soybean sudden death syndrome resistance in the soybean plant in a greenhouse setting, the method comprising the steps of:

- (a) inoculating soil with a low density inoculum of *Fusarium solani*;
- (b) planting a soybean plant in said inoculated soil;
- (c) growing said plant in said soil ~~for a predetermined period of time~~ in a greenhouse;
- (d) isolating *Fusarium solani*-infected tissue from said plant;
- (e) culturing said infected tissue for a period of time sufficient to allow for fungal colony forming unit growth;
- (f) ~~statistically determining scoring at least one of~~ disease severity and~~[[/or]]~~ infection severity in said plant using the number of said fungal colony forming units; and
- (g) ~~comparing correlating at least one of~~ said disease severity and~~[[/or]]~~ said infection severity to ~~at least one of~~ disease severity and~~[[/or]]~~ infection severity data from genetic markers associated with soybean sudden death syndrome resistance to identify a correlation, ~~the presence of a statistically significant~~ wherein a statistically significant correlation indicating ~~the~~ indicates presence of soybean sudden death syndrome resistance in said soybean plant.

39. (Currently amended) ~~The method of claim 38, A method of determining the presence of soybean sudden death syndrome resistance in the soybean plant in a greenhouse setting, the method comprising the steps of:~~

Serial No.: 09/954,773

- (a) inoculating soil with a low density inoculum of *Fusarium solani*, wherein said low density inoculum of *Fusarium solani* comprises an inoculum density of about 3×10^3 spore/cm³ soil;
- (b) planting a soybean plant in said inoculated soil;
- (c) growing said plant in said soil in a greenhouse;
- (d) isolating *Fusarium solani*-infected tissue from said plant;
- (e) culturing said infected tissue for a period of time sufficient to allow for fungal colony forming unit growth;
- (f) scoring at least one of disease severity and infection severity in said plant using the number of said fungal colony forming units; and
- (g) correlating at least one of said disease severity and said infection severity to at least one of disease severity and infection severity data from genetic markers associated with soybean sudden death syndrome resistance to identify a correlation, wherein a statistically significant correlation indicates presence of soybean sudden death syndrome resistance in said soybean plant.

40. (Original) The method of claim 38, wherein said *Fusarium solani*-infected plant tissue comprises root tissue.

41. (Original) A method of characterizing resistance to soybean sudden death syndrome in a soybean plant, the method comprising the steps of:

- (a) isolating roots from a soybean plant infected by *Fusarium solani*;
- (b) culturing the root on a culture plate including a restrictive growth medium that provides for slow fungal growth and restricted bacterial growth;
- (c) determining root infection severity by statistically evaluating the number of *Fusarium solani* colony forming units on said culture plate; and
- (d) characterizing resistance to soybean sudden death syndrome in said soybean plant based on said determined root infection severity.

Serial No.: 09/954,773

42. (Original) The method of claim 41, wherein said characterization of resistance to soybean sudden death syndrome further comprises determining a level of resistance to soybean sudden death in the soybean plant.

Please add the following new claims:

43. (New) The method of claim 41, wherein the restrictive growth medium comprises one or more fungicidal antibiotics and one or more bacteriocidal or bacteriostatic antibiotics.

44. (New) The method of claim 43, wherein the one or more fungicidal antibiotics are selected from the group consisting of 2,6-dichloro-4-nitroaniline and pentachloronitrobenzene and the one or more bacteriocidal or bacteriostatic antibiotics are selected from the group consisting of tetracycline, neomycin, streptomycin, and rifampicin.